PP01451.105; 20366-141002 SERIAL NO.: 10/601,091

AMENDMENTS TO THE CLAIMS:

Please cancel claims 1-10, 14, 15, 17, 22, 24, 26, 28, 31, 33-35, 37, 38 and 41 without prejudice.

PATENT

FILED: June 19, 2003

Please add new claims 44-54.

Please amend claims 11-13, 16, 18, 19, 20, 21, 23, 25, 27, 29, 36, 39, 40 and 42 as follows:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-10 (Cancelled)

- 11. (Currently amended) A cDNA molecule which encodes an isolated and purified protein having an amino acid sequence which is at least 85% identical to an amino acid sequence encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1–18 1 and 11, wherein said polynucleotide is expressed at a higher level in metastatic breast cancer tissue relative to non-metastatic breast cancer tissue percent identity is determined using a Smith-Waterman homology search algorithm using an affine gap search with a gap open penalty of 12 and a gap extension penalty of 1.
- 12. (Currently amended) The cDNA molecule of claim 11 which encodes a protein having an amino acid sequence which is at least 85% identical to SEQ ID NO: 19 95% identical to an amino acid sequence encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 and 11.
- 13. (Currently amended) A cDNA molecule which encodes at least 8 contiguous amino acids of a protein encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1–18 1 and 11.

Claims 14-15 (Cancelled)

PP01451.105; 20366-141002 PATENT SERIAL NO.: 10/601,091 FILED: June 19, 2003

- 16. (Currently amended) A cDNA molecule comprising <u>a polynucleotide</u> selected from the group consisting of:
- (a) at least 12 20 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11 1-18;
- (b) at least 30 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11;
- (c) at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11; and
- (d) at least 75 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11.

Claim 17 (Cancelled)

- 18. (**Currently amended**) The cDNA molecule of claim 47 11 which is at least 85% identical to the nucleotide sequence shown in SEQ ID NO:48 1.
- 19. (Currently amended) An isolated and purified subgenomic polynucleotide comprising a nucleotide segment selected from the group consisting of:
- (a) a segment of at least 30 contiguous nucleotides which hybridizes under stringent conditions to a nucleotide sequence selected from the group consisting of SEQ ID NOS:1-18 1 and 11; and
- (b) a segment of at least 50 contiguous nucleotides which hybridizes under stringent conditions to a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11 after washing with 0.2 X-SSC at 65°C,

wherein said subgenomic polynucleotide is expressed at a higher level in metastatic breast cancer tissue relative to non-metastatic breast cancer tissue, wherein said stringent conditions are selected from the group consisting of 4X SSC at 65°C; 50% formamide, 4X SSC at 42°C; or 0.5X SSC, 0.1% SDS at 65°C.

PP01451.105; 20366-141002 SERIAL NO.: 10/601,091

PATENT FILED: June 19, 2003

- 20. (Currently amended) The isolated and purified subgenomic polynucleotide of claim 19 wherein the nucleotide segment hybridizes to a nucleotide sequence as shown in SEQ ID NO:18 1.
 - 21. (Currently amended) A construct comprising:

a promoter; and

a polynucleotide segment encoding at least 8 contiguous amino acids of a protein encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS:1-18 1 and 11, wherein the polynucleotide segment is located downstream from the promoter, wherein transcription of the polynucleotide segment initiates at the promoter.

Claim 22 (Cancelled)

- 23. (**Currently amended**) A host cell comprising a construct which comprises: a promoter and:
- a polynucleotide segment encoding at least 8 contiguous amino acids of a protein encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1–18 1 and 11.

Claim 24 (Cancelled)

- 25. (**Currently amended**) A recombinant host cell comprising a new transcription initiation unit, wherein the new transcription initiation unit comprises in 5' to 3' order:
 - (a) an exogenous regulatory sequence;
 - (b) an exogenous exon; and
 - (c) a splice donor site,

wherein the new transcription initiation unit is located upstream of a coding sequence of a gene, wherein the coding sequence comprises a nucleotide sequence selected from the group

PP01451.105; 20366-141002 SERIAL NO.: 10/601,091

consisting of SEQ ID NOS: 1-18 1 and 11, wherein the exogenous regulatory sequence controls transcription of the coding sequence of the gene.

PATENT

FILED: June 19, 2003

Claim 26 (Cancelled)

- 27. (**Currently amended**) A polynucleotide probe comprising <u>a detectable</u> label and a polynucleotide selected from the group consisting of:
- (a) at least 12 20 contiguous nucleotides selected from the group consisting of SEQ ID NOS:1 and 11 1-18 and (b) a detectable label;
- (b) at least 30 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS;1 and 11;
- (c) at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11; and
- (d) at least 75 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11.

Claim 28 (Cancelled)

29. (Currently amended) A method for identifying a metastatic tissue or metastatic potential of a tissue, comprising the step of:

measuring in a tissue sample an expression product of a gene comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1-4, 6-13, and 15-18 1 and 11, wherein a tissue sample which expresses a product of a gene comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1, 4, and 11, 16, 17, and 18 or which does not express a product of a gene comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 2, 3, 6, 7, 8, 9, 10, 12, 13, and 15 is identified as metastatic or as having metastatic potential.

30. (**Original**) The method of claim 29 wherein the tissue sample is selected from the group consisting of breast and colon tissue.

PP01451.105; 20366-141002 SERIAL NO.: 10/601,091 FILED: June 19, 2003

(Cancelled) Claim 31

32. The method of claim 29 wherein the expression product is mRNA. (Original)

PATENT

Claims 33-35 (Cancelled)

A set of primers for amplifying at least a portion of 36. (Currently amended) a gene having a coding sequence selected from the group consisting of the nucleotide sequences shown in SEQ ID NOS: 1-18 1 and 11.

(Cancelled) Claims 37 and 38

- A polynucleotide array comprising at least one 39. (Currently amended) single-stranded polynucleotide which comprises at least 12 contiguous nucleotides of a nucleotide sequence selected from the group consisting of: SEQ ID NOS:1-18
- (a) at least 20 contiguous nucleotides selected from the group consisting of SEQ ID NOS:1 and 11 1-18;
- (b) at least 30 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11;
- (c) at least 50 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11; and
- (d) at least 75 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1 and 11.
- The polynucleotide array of claim 40 39 wherein 40. (Currently amended) the nucleotide polynucleotide comprises a sequence is selected from the group consisting of SEQ ID NOS: 1, 4, and 11, 16, 17, and 18.

(Cancelled) Claim 41

PP01451.105; 20366-141002 PATENT SERIAL NO.: 10/601,091 FILED: June 19, 2003

42. (**Currently amended**) A method of identifying a metastatic tissue or metastatic potential of a tissue, comprising the steps of:

contacting a tissue sample comprising single-stranded polynucleotide molecules with a polynucleotide array comprising at least one single-stranded polynucleotide probe, wherein the at least one single-stranded polynucleotide probe comprises at least 12 contiguous nucleotides of a nucleotide sequence selected from the group consisting of SEQ ID NOS:1-4, 6-13, and 15-18 1 and 11, wherein the tissue sample is suspected of being metastatic or of having metastatic potential;

detecting double-stranded polynucleotides bound to the polynucleotide array, wherein detection of a double-stranded polynucleotide comprising contiguous nucleotides selected from the group consisting of SEQ ID NOS: 1-4, 6-13, and 15-18 1 and 11 or lack of detection of a double-stranded polynucleotide comprising contiguous nucleotides selected from the group consisting of SEQ ID NOS:2, 3, 6, 7, 8, 9, 10, 12, 13, and 15 identifies the tissue sample as metastatic or of having metastatic potential.

- 43. (**Original**) The method of claim 42 wherein the tissue sample is a breast or colon sample.
- 44. (New) The cDNA molecule of claim 13 which encodes at least 12 contiguous amino acids of a protein encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11.
- 45. (New) The cDNA molecule of claim 16 wherein the polynucleotide is expressed at a higher level in metastatic breast cancer tissue relative to non-metastatic breast cancer tissue.
- 46. (New) The cDNA molecule of claim 13 which encodes at least 12 contiguous amino acids of a protein encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11.
- 47. (New) The cDNA molecule of claim 11 which is at least 90% identical to a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NO: 1 and 11.

PP01451.105; 20366-141002 PATENT SERIAL NO.: 10/601,091 FILED: June 19, 2003

48. (New) A polypeptide encoded by the cDNA molecule of any one of claim 11, 12 or 16.

- 49. (New) The polypeptide of claim 48 encoded by a polynucleotide comprising a nucleotide sequence selected from the group consisting of SEQ ID NOS: 1 and 11.
- 50. (New) A method of making a recombinant vector comprising inserting a cDNA molecule of claim 1 into a vector in operable linkage to a promoter.
 - 51. (New) A recombinant vector produced according to the method of claim 50.
- 52. (New) A method of making a recombinant host cell comprising introducing the recombinant vector of claim 51 into a host cell.
 - 53. (New) A recombinant host cell produced according to the method of claim 52.
- 54. (New) A method of producing a polypeptide comprising culturing the recombinant host cell of claim 53 under conditions such that the polypeptide is expressed, and recovering said polypeptide.